

Process of Invention. The Acceleleglove

Dr. Jose L. Hernandez-Rebollar

National Museum of American History. August 3rd 2005

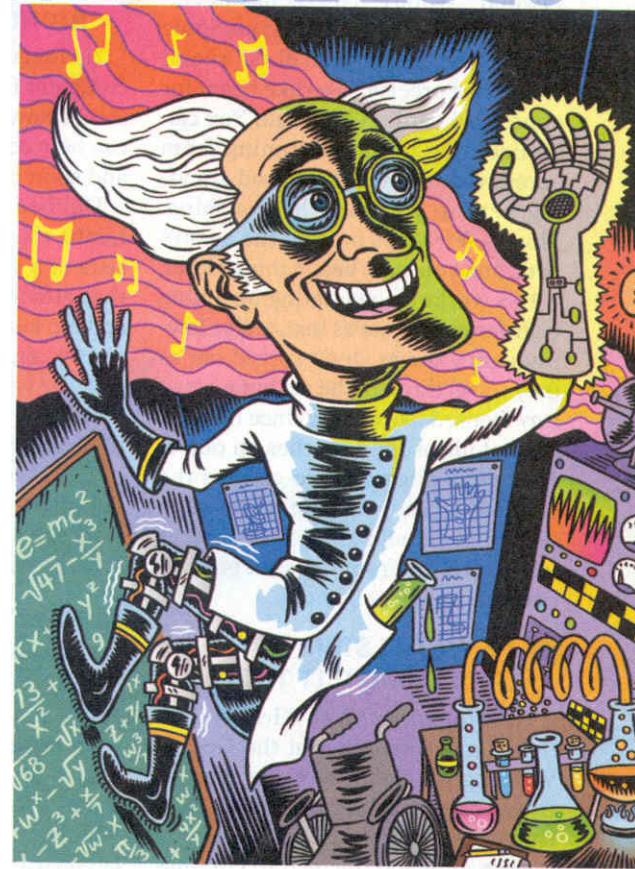
Outline

- The Beginning
- Invention or Innovation?
- Is there a Method to invent?
- ASL
- The Acceleleglove
- Demo





How this happened?



Jose L. Hernandez-Rebollar Innovative Lives Presentation AC0917



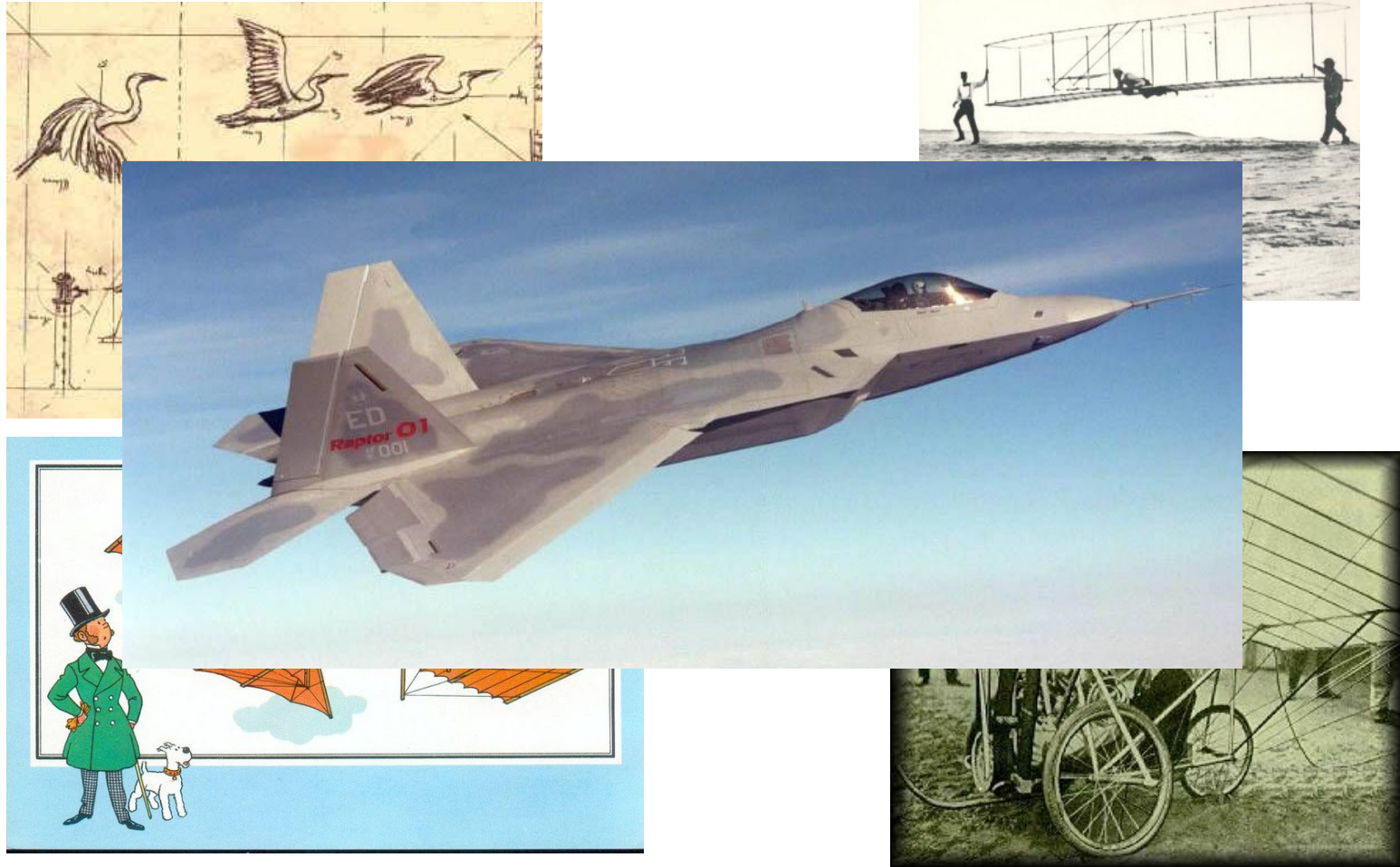
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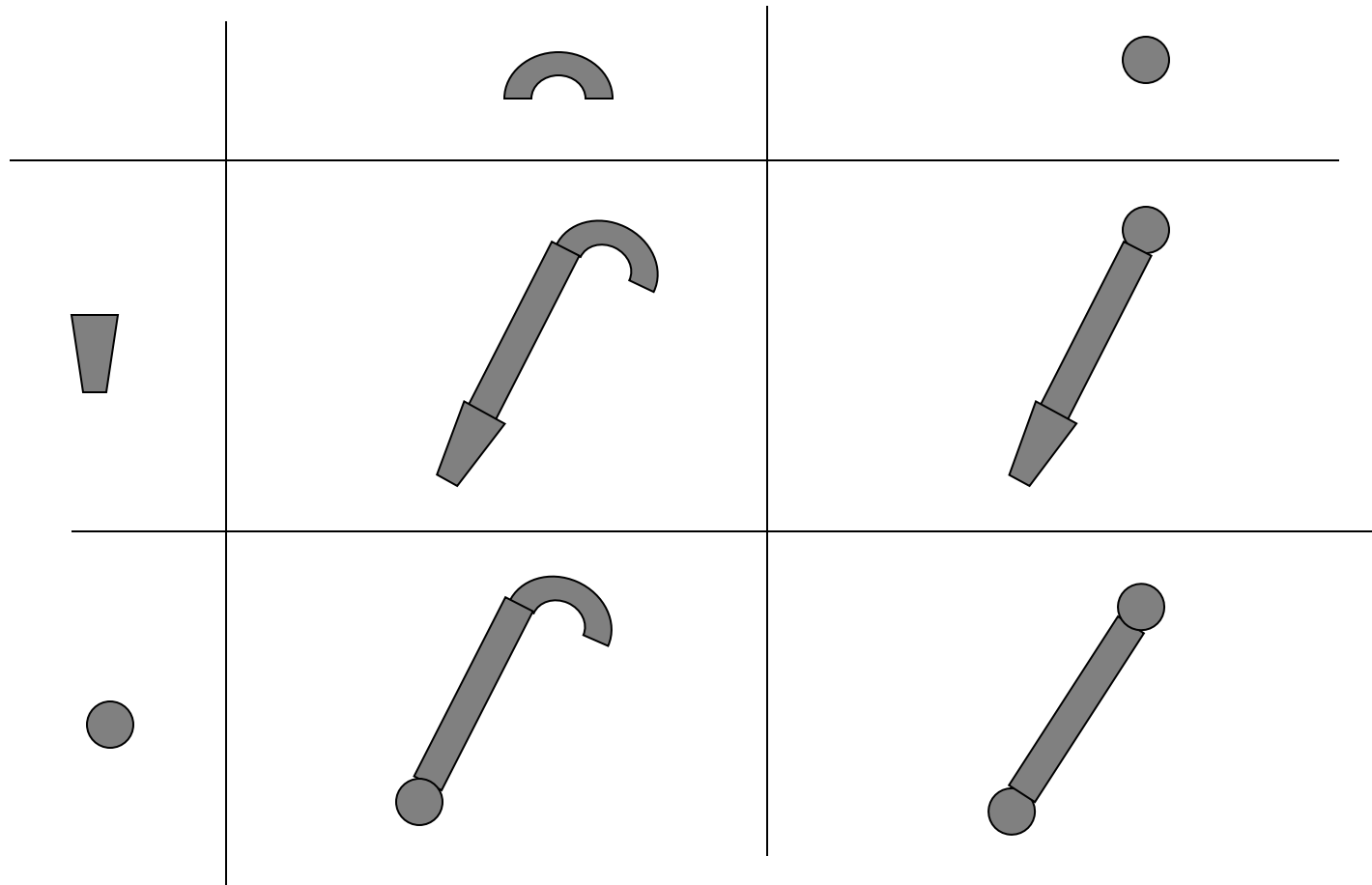
Invent or Innovate

- Create something original = never built before
- 'not obvious'
- Yet reproducible by somebody with enough expertise
- Improve an existing object
- 'er' (fast, cheap, small...)

Can we really invent?



Let's Invent something (the cane case)



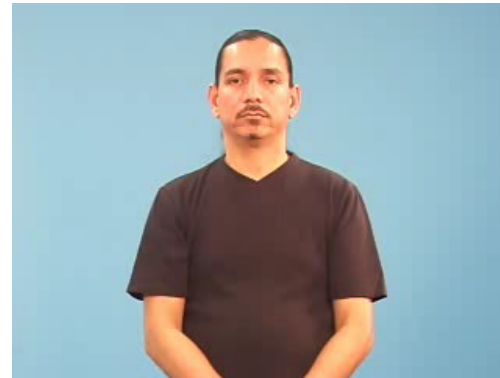
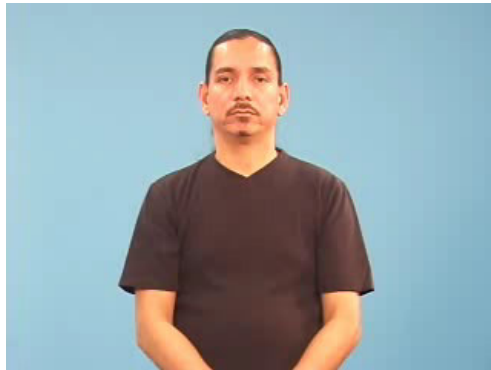
The Acceleglove

- Communication problem
- Translation
- Who's impaired??

Do you understand?

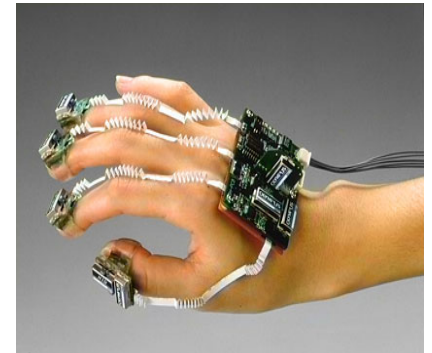
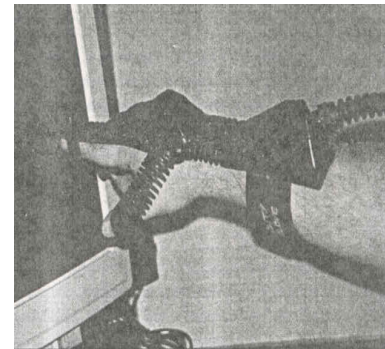
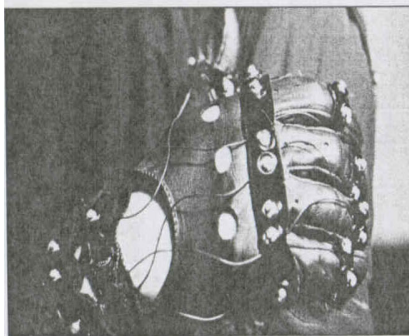
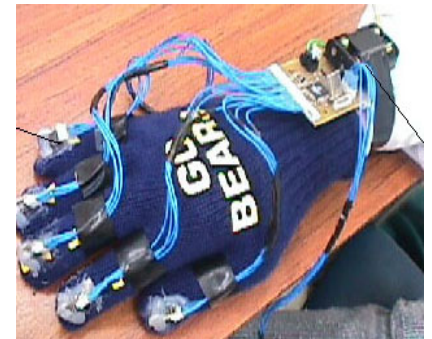
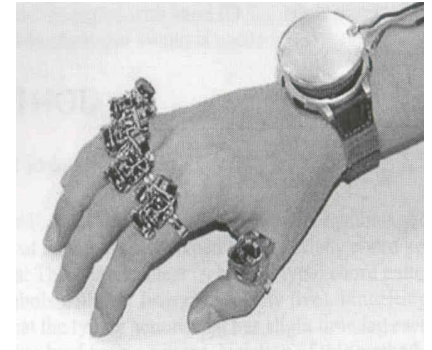
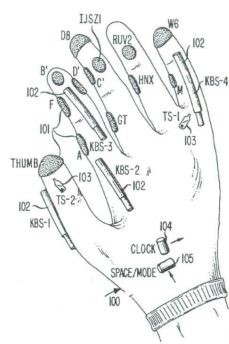
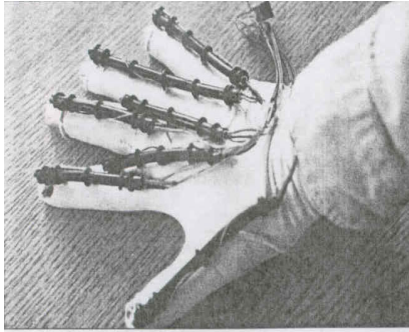
今日の「主要」記事一覧

سمو ولي العهد يستقبل الأمير تركي وجموع المواطنين



Do you sign?

- Facial expressions
- Body expressions
- Pantomimic
- Iconic
- Arbitrary



The Acceleglove system



Properties

- Accelerometers measure finger position independent of hand size
- Potentiometers on shoulder and elbow measure arm's rotation and elbow's bending independent of arm length
- Micro controller on glove sends values to the computer to recognize hand postures and arm movements

Demo

Applications

- American Sign Language Dictionary
- American Sign Language translation
- Learning tools
- Games

Q & A

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